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10/621,207	07/15/2003	Rajeev Grover	200300624-1	1087

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EXAMINER
CHOU, ANDREW Y

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/621,207	Applicant(s) GROVER ET AL.
	Examiner Andrew Y. Chou	Art Unit 2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _14 May 2007_.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-17_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) _1-17_ is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some *   c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   This office action is in response to the amendment filed on 05/14/2007.

2.   Claims 1, 10, and 15 have been amended.

3.   Claims 1-17 are pending.

Continued Examination Under 37 CFR 1.114

4.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

05/08/2007 has been entered.

Response to Arguments

5.   Applicant's arguments filed on 05/14/2007 have been fully considered buy they

are not persuasive.

On page 6 of the Remarks Section, Applicant argues that Kappel does not teach

or suggest, "a recovery agent for taking an action upon an occurrence of an exception,

wherein the action is performed outside of a debugging operation", as recited in claim 1.

Examiner respectfully disagrees and points to Kappel page 4, [0027] and [0029].

Kappel discloses a method for catching an exception that is performed in compliance

with the exception handling system. Clearly, the action of catching an occurrence of an exception is performed outside a debugging operation.

On page 8 of the Remarks Section, Applicant argues that Kappel fails to teach "restarting the programming task, terminating the programming task, resetting a system running the programming task, and disregarding the exception" as recited in claim 1. Examiner respectfully disagrees and points to the plain language of the claim. Claim 1 recites "…includes <u>one or a combination </u>of restarting the programming task, terminating the programming task, resetting a system running the programming task, and disregarding the exception." (emphasis added). Thus, Kappel in Fig. 3, step 59, "EXIT EXCEPTION HANDLING SYSTEM", discloses a method for terminating the programming task.

On page 8 of the Remarks Section, Applicant argues that nowhere does Kappel teach that the memory is non-volatile. Examiner respectfully disagrees and points to Kappel page 2, [0018], lines 3-5, "…and non-volatile memory elements…".

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7.   Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kappel et al. US 2002/0029299 A1 (hereinafter Kappel).

Claim 1:

Kappel discloses an exception handling mechanism comprising:

an exception handler for recording exception information dependant on types of exceptions and programming tasks that encounter exceptions (see for example FIG. 2, item 50, and related text); and

a recovery agent for taking an action upon an occurrence of an exception, wherein said action is performed outside of a debugging operation (Kappel page 4, [0027] and [0029], and related text);

wherein the action to be taken upon the occurrence of the exception corresponds to a type of exception and a programming task, and includes terminating the programming task (see for example FIG. 3, step 58, "Propagate exception to a central place for handling", and related text) and disregarding the exception (see for example FIG. 3, step 59, "Exit exception handling system" and related text).

Claim 2:

Kappel further discloses the mechanism of claim 1 wherein the recorded exception information associated with an exception is associated with a signature for identifying the recorded exception information with its associated exception (see for example page 3, [0029]).

Claim 3:

Kappel further discloses the mechanism of claim 2 wherein the signature includes a

version of a program running the programming task (see for example page 3, [0029]).

Claim 4:

Kappel further discloses the mechanism of claim 1 wherein a plurality of sets of

exception information for a plurality of exceptions is maintained in the system running

the programming task; each set of exception information being associated with a

signature for identifying that set of exception information (see for example 3, [0030]).

Claim 5:

Kappel further discloses the mechanism of claim 1 wherein the recorded exception

information associated with an exception is associated with a signature for identifying

the format of the exception information (see for example page 3, [0029]-[0030]).

Claim 6:

Kappel further discloses the mechanism of claim 1 wherein the recorded exception

information includes data related to the program stack, including data to reconstruct the

stack at time of exception (see for example page 3, [0027], "method stack").

Claim 7:

Kappel further discloses the mechanism of claim 1 further comprising an analysis tool

communicating via an interface with the system running the programming task, for

identifying causes of the exception (see for example FIG. 2, item 50, "Exception

handling system", item 24, "Local interface", and related text)

Claim 8:

Kappel further discloses the mechanism of claim 7 wherein the analysis tool uses a

version to match the object code of a program running the programming task to the

source code of the program (see for example column FIG. 3, step 52, and related text).

Claim 9:

Kappel further discloses the mechanism of claim 1 wherein the exception handler and

the recovery agent run on a first system embedded in a second system (see for

example FIG. 1, and related text).

Claim 10:

Kappel discloses a processing system comprising:

a first system (see for example FIG. 2, item 22, and related text);

a second system embedded in the first system (see for example Fig. 2, item 50, and

related text);

an exception handler running in the second system for recording exception information

upon an occurrence of an exception in the second system (see for example FIG. 2, item

50, and related text); and

a recovery agent running on the second system, for taking an action upon the

occurrence of the exception based on the recorded exception information (see for

example FIG. 2, item 50, and related text);

wherein the action corresponds to a type of exception and a programming task (see for

example FIG. 3, and related text).

Claim 11:

Kappel further discloses the processing system of claim 10 further comprising an

analysis tool for receiving, via an interface (see for example FIG. 2, item 24, and related

text), the recorded exception information from the second system and for

identifying the cause of the exception (see for example FIG. 3, step 52, and related

text).

Claim 12:

Kappel further discloses the processing system of claim 10 wherein the second system

includes non- volatile memory for storing exception information (see for example FIG. 2,

item 22, and related text).

Claim 13:

Kappel further discloses the processing system of claim 12 wherein the exception

information stored in the non-volatile memory is compressed (see for example FIG. 2,

item 22, and related text).

Claim 14:

Kappel further discloses the processing system Of claim 12 wherein the exception

information stored in non-volatile memory includes a plurality of sets of exception

information, each set being associated with an exception and a signature (see for

example FIG. 4, and related text).

Claim 15:

Kappel discloses a computing system comprising:

an exception handler for recording exception information on non-volatile memory (see

for example page 2, [0018], lines 3-5, "...and non-volatile memory elements...") upon an

occurrence of an exception (see for example FIG. 2, item 50, and related text);

a recovery agent for taking an action upon the occurrence of the exception based on the

recorded exception information; and an analysis tool for identifying the cause of the

exception (see for example FIG. 3, step 58, and related text);

wherein the analysis tool receives the exception information from the non\- volatile

memory via an interface interfacing a first system and a second system running the

exception handler and the recovery agent (see for example FIG. 3, step 59, and related

text).

Claim 16:

Kappel further discloses the computing system of claim 15 wherein the second system

(see for example FIG. 1, item 1 la, and related text) is embedded in a third system (see

for example FIG. 1, item 1 1c, and related text).

Claim 17:

Kappel further discloses the computing system of claim 15 wherein the recorded

exception information includes data related to a program stack (see for example FIG. 4,

and related text).

Conclusion

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Andrew Y. Chou whose telephone number is (571) 272-

6829. The examiner can normally be reached on Monday-Friday, 8:00 am - 4:30 pm. If

attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tuan Q. Dam, can be reached on (571) 272-3695.

The fax phone number for the organization where this appiication or proceeding is

assigned is (571) 273 8300.

Any inquiry of a general nature of relating to the status of this application or proceeding

should be directed to the TC 2100 Group receptionist whose telephone number is (571)

272 2100.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair- direct.uspto.,qov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll

free).

AYC

TUAN DAM
SUPERVISORY PATENT EXAMINER